

# **Dr Edward Baker, P.Geo.**

## **Project Scientist, Knight Piésold - Vancouver, BC**

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Currently a geochemist working for Knight Piésold in Vancouver. Significant experience with a variety of programming languages and analytical techniques. Looking forward to using geoscience to solve problems that matter to our planet.

### **Key Skills**

Geology, Petrology, Python, Fluid geochemistry, Water balance/Quality modelling, GOLDSIM, PHREEQC, Proposal and report writing, Thermodynamic modelling, Kotlin, Julia, SQL, Presenting data/Conferences, Remote-sensing/GIS, TensorFlow/Keras Git, Docker.

### **Projects**

<b>Mount Milligan Mine (BC)</b>	Hydrogeology field work, packer testing, VWP installs, Geotechnical Logging, Quarterly and Annual Reporting
<b>Josemaria Project (ARG)</b>	Water-quality modelling, Baseline studies/analysis and reporting, GOLDSIM modelling
<b>Gosselin Mine (ON)</b>	Geochemical ML/ARD Characterisation, Geochemical change modelling for comparison with Côté deposit.
<b>Environmental Dashboard (Online)</b>	Designed and wrote code for an environmental analysis dashboard, used by the client to demonstrate environmental compliance to stakeholders, SkLearn and PHREEQC used for live analysis within the dashboard
<b>Hydro Power Model (BC)</b>	Python numerical model for power generation, used to optimise turbine design and determine likely power availability
<b>Side Projects</b>	Chlorite partitioning study for exploration around metasomatic/hydrous ore bodies, discovery of fertile fluids. Generated phase diagrams for Li/Spodumene crystallization in with hydrous melts

### **Employment History**

<b>Intermediate Geochemist – Knight Piésold, Vancouver, BC – Jan 2024 – Present</b>	Automating data processing and publication; Geochemical modelling and analysis – PHREEQC/ASE; ab initio modelling for estimation of crystallographic parameters; Coded and deployed environmental data dashboard using Docker.
<b>Geochemist – Knight Piésold, Vancouver, BC – Aug 2023 – Dec 2024</b>	Writing applications and reporting for regulatory filings; Geochemical modelling and analysis – PHREEQC/ASE.
<b>Postdoctoral Fellow – University of Manchester, UK - 2021 – 2023</b>	Main project combined experimental geochemistry with numerical modelling, looking at light element behaviour in reducing conditions; Developed and funded independent research which included collaborations with national laboratories and mining companies; Coded android mobile app to automate calculations required for laboratory work; Trained and mentored research students; Significant experience with a wide range of analytical methods, including mass spectrometry and e-beam techniques.
<b>Ph.D. - University of Oxford, UK - 2016 - 2021</b>	Research scholarship, Planetary materials Institute, Japan Co-Founded Oxford Society of Economic Geology – Organised and Lead field trip to Sweden

### **Education**

<b>University of Oxford 2016 - 2021</b>	PhD, Earth Science – Thesis Title: ‘On the Evolution of the Lunar Magma Ocean’
<b>University of Oxford 2012 - 2016</b>	Undergraduate Masters – MSci Earth Science - 2:1

### **Courses and Conferences**

Exploration Tech, Vancouver 2024; BC ML/ARD conference, Vancouver 2023, 2024; iCARD, Halifax 2024; AME Roundup, Vancouver 2024; British planetary science conference, Oxford; Terrestrial planets conference, Cambridge.